

**Notice of Allowability**

Application No.

10/764,294

Examiner

Jaworski Francis J.

Applicant(s)

PORTER ET AL.

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview 6-16-05.
2. ☒ The allowed claim(s) is/are 1 - 37.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Francis J. Jaworski  
Primary Examiner

### EXAMINER'S AMENDMENT

An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on November 16, 2005, Chance E. Hardie, Reg. No. 55,247 requested an extension of time for TWO MONTH(S) and authorized the Director to charge Deposit Account No. 20-0782/UNMC/0014 the required fee of \$225.00 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In Claim 1 in line 1 after " identifying " has been added -- early --,  
And in line 5 after " sequence " has been added -- which is adapted to identify direct adherence of the microbubbles to the dysfunctional vascular endothelium --; thereafter " retention " has been changed to -- adherence -- and in line last " indicates " has been changed to -- identifies --.

In Claim 26 in line 1 before " dysfunctional " has been added -- early --, and in line 6 after " 0.4 " has been added -- which is adapted to identify direct adherence of the microbubbles to the dysfunctional vascular endothelium, thereafter " retention " has

been changed to -- adherence -- and in line last " indicates " has been changed to -- identifies --.

The following is an examiner's statement of reasons for allowance:

Whereas Averkiou et al is directed to low power ensonation of microbubbles in order to assess reperfusion of microbubbles into myocardium in order to determine degree of feeder coronary artery obstruction per col. 5 lines 23 – 25, the terms '(early) dysfunctional vascular endothelium' however have come to mean dysfunctional status i.e. disturbance of biological functions of the vessel wall lining prior to gross obstructive effects of plaque buildup such as is inferenced by the reperfusion latencies studied in the Averkiou et al patent, see Villanueva page 5 lines 7 – 15 and this application's term usage . Accordingly the term 'early' inserted by amendment is meant to further emphasize the distinction between pinpointing wall functional abnormalities prior to notable plaque buildup versus merely imaging obstructive vessel closures be they characterized loosely as 'dysfunctional' in the sense of flow-inhibiting anatomic abnormalities. In the case of the Villanueva et al while the perfusion of contrast agent through myocardial muscle was heretofore observed to be prolonged, it was not thought that this phenomenon could serve to identify early dysfunctional vessel endothelial sites in an individual since Villanueva et al qualifies that their earlier abstract finding of adherence to endothelial cells in in-vitro cell cultures had never led to a demonstration that such direct identification in vivo was possible, page 9 lines 19 – 21, and Villanueva et al chose to advance their own work with a specialized antigen

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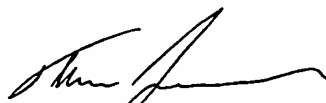
conjugate for binding a microbubble to an inflamed or activated vessel endothelial site whereupon the microbubble is carried as a marker not directly bound to the imaged site and therefore Villanueva et al was not amenable to visualize direct microbubble adherence with a simple standard microbubble injectate preparation in order to identify early dysfunctional vessel endothelial sites in the tested individual..

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

11-16-05



Francis J. Jaworski  
Primary Examiner